

NASA Space Science Day Events-Engaging Students in Science. S. Foxworth¹, A. Mosie¹, J. Allen³, J. Kent¹, A. Green⁴, ¹Jacobs JETS Contract, NASA Johnson Space Center, Mail Code XI3, Houston, TX 77058, USA Suzanne.m.foxworth@nasa.gov, ³NASA SSERVI College of Charleston Chamberton, SC, ⁴ San Jacinto College Beamer Road, Houston TX 77089,

Introduction: NASA Space Science Day Events (NSSD) provide an out of school experiential learning environment for elementary and middle school students. NASA Astromaterials Research and Exploration Science (ARES) staff and scientists train University students to become mentors and lead activities for the younger students. NSSD has four goals:

- Have elementary and middle school students experience a university campus setting.
- Have all those involved have fun with NASA Space Science.
- Allow college and university students to serve as space science mentors at NSSD and other local events.
- Help students understand that they could be university students too if they stay in school.

Identify students and training: The University hosting the NASA Space Science Day event will select students to serve as mentors. The ARES team will train the selected mentors to conduct several NASA Space Science activities. Choosing mentors allows them to become confident in teaching the material. To further encourage their confidence they are encouraged to practice the activity they will be sharing with younger students.

Community Night: A Community Night is held the night before the student event. The community is invited to take part in hearing a speaker, usually a NASA scientist or engineer, and see displays from NASA. This educates the public on what NASA is currently doing as well as connecting NASA with the public. Many parents bring students that will also be attending the NSSD. The Community Night allows the public to have a one on one experience with the NASA presenters. The university students are present and also interact with the public.

Teacher Training and Certification: Several weeks prior to the NSSD events, teachers from surrounding schools are invited to participate in a Lunar and Meteorite Certification workshop with complimentary NASA Discovery Program activities. This allows teachers to obtain the Lunar and Meteorite Sample Disks for classroom use. Many of the activities

presented to the teachers can be streamlined into their curriculum, thus continuing the NSSD connection to their curriculum.

The event: The NASA Space Science Day Event follows the same format of planning and execution at all host universities and colleges. These institutions realized the importance of such an event and sought funding to continue hosting NSSD events. In 2014, NASA Johnson Space Center ARES team has supported the following universities and colleges that have hosted a NSSD event; the University of Texas at Brownsville, San Jacinto College, Georgia Tech University and Huston-Tillotson University. Other universities and colleges are continuing to conduct their own NSSD events. NASA Space Science Day Events are supported through continued funding through NASA Discovery Program.

Community Night begins with a NASA speaker and Astromaterials display. The entire community surrounding the host university or college is invited to the Community Night. This year at the Huston-Tillotson (HTU) NSSD, we had Dr. Laurie Carrillo, a NASA Engineer, speak to the public and students. She answered questions, shared her experiences and career path. The speaker sets a tone of adventure and discovery for the NSSD event. After the speaker, the public is able to view Lunar and Meteorite samples and ask questions from the ARES team.

The students and teachers from nearby schools attended the NSSD Event the following day. Students are able to see the university or college campus and the university or college mentors are available for questions. Students rotate through hour long Science Technology Engineering and Mathematics (STEM) sessions and a display area. These activities are from the Discovery Program activities that tie in directly with k-12 instruction. The sessions highlight the STEM in exploration and discovery. The Lunar and Meteorite display is again available for students to view and ask questions. In the display area, there are also other interactive displays. Angela Green, from San Jacinto College, brought the Starlab for students to watch a planetarium exhibit for the NSSD at Huston-Tillotson University. Many HTU mentors were leading activities in the display room such as build a comet, volcano layering and robotics manipulation. Students were exposed to a variety STEM career possibilities and

information. The students could relate the displays and sessions to what they were learning in school. The HTU mentors made the connection clear for the students.

The students ended the event with a mission design presentation. They were able to take what they had learned during the day and were able to create a mission. Students presented their Mission Design and gained confidence in STEM.

Conclusion: NASA Space Science Day Events provides an out of school experiential learning environment for students to enhance their STEM curriculum and let students see a college campus. The experiences students gain from attending NSSD gives them the confidence to see themselves on a college campus, possibly majoring in a STEM degree, and understand the importance of completing school.